

STATIC PROGRESSIVE SPLINTING TO IMPROVE WRIST STIFFNESS AFTER DISTAL RADIUS FRACTURE: A PROSPECTIVE CASE SERIES STUDY

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Stiffness can develop following distal radius fracture despite a course of controlled mobilization and therapy, causing major deficits in wrist motion and function. Adjunctive splinting is often recommended for these cases; static progressive stretch (SPS) splinting is a technique shown to be effective in lengthening joint soft tissues by applying controlled stress.

This prospective consecutive case series examines the effectiveness of SPS splinting in the management of significant persistent wrist stiffness following distal radius fracture. The outcome measures for this study indicate that SPS splints may be useful in treating persistent wrist stiffness for this patient population especially when used early in the rehabilitation process.



Materials and Methods

- 8 consecutive patients met inclusion / exclusion criteria.
- Subjects exhibited a deficit of wrist flexion or extension ROM without improvement for 2 weeks, despite standard therapy treatment.
- Patients utilized an SPS wrist device (Joint Active Systems Inc, Effingham, IL) and followed a protocol of 3 thirty-minute session per day, per direction of ROM loss.
- Subjects were monitored at 6, 12, and 24 week intervals. 4 subjects returned for 1 year follow up.
- Outcome measures included passive wrist flexion and extension ROM, and DASH scores.
- Median time from surgery to splint use was 77 days (range, 58-148).
- Median duration of splint use was 88 days (range, 21-180).
- 6 week median total passive sagittal wrist ROM gain: 27° (range, 65° to 92°).
- 12 week median total passive wrist ROM gain: 41° (65° to 106°).
- 6 month median total passive wrist ROM gain: 50° (65° to 115°).
- 12 month median total passive ROM gain: 60° (65° to 125°).
- Median DASH score improved 21 points at 12 weeks and 28 points at 1 year.

Results

- All patients exhibited increases in ROM and function at 6 months.
- Therapy visits decreased from 2-3 visits per week to 1 or less per week for most patients.

Conclusion

- When standard therapy no longer results in ROM progress, a trial of SPS splinting should be considered.



Full Study Available.

Please contact JAS at 800-879-0117 or info@jointactivesystems.com.